

WA-P-LELE-04-026 Specification

1. Explanation of part number :

WA - P - LELE - 04 - 026
(1) (2) (3) (4) (5)

(1) Product Type : Wireless Antenna

(2) PCB: PCB

(3) Frequency : 2400~2500MHz&5100~5800MHz&5925~7125MHz

(4) Coaxial Cable Type : With ϕ 0.81 Main Black (155.6) / AUX Gray (224.8mm)

(5) Suffix : 026

2. Storage Condition:

Temperature -40 to +70℃
Humidity 20 to 65 %RH

3. Operating Condition:

Temperature -40 to +70℃
Humidity 10 to 85 %RH

4. Electrical Specification :

*Those specifications were specially defined for **LG 15ZB90Q/16ZB90Q** WIFI model, and all characteristics were measured under the model's handset testing jig .*

4-1. Frequency Band:

Frequency Band	MHz
WIFI\BT	2400~2500 & 5100~5800 & 5925~7125

UNLESS OTHER SPECIFIED TOLERANCES ON : X = $\pm$ X.X = $\pm$ X.XX = $\pm$ ANGLES = $\pm$ HOLEDIA = $\pm$		 佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.	
SCALE :	UNIT : mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY: 张涛	CHECKED BY: 张涛		
DESIGNED BY : 胡志清	APPROVED BY : 徐克文		
TITLE : WA-P-LELE-04-026 Specification		DOCUMENT NO.	PAGE REV. P1

4-2. Impedance

50 ohm nominal

4-3. Matching circuit

None

4-4. VSWR

4-4.1 Measuring Method

1.A 50Ωcoaxial cable is connected to the antenna. Then this cable is connected

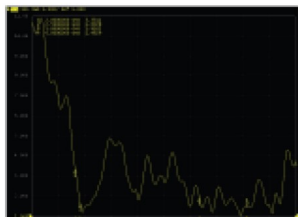
to a network analyzer to measure the VSWR

2.Keeping this jig away from metal at least 20cm

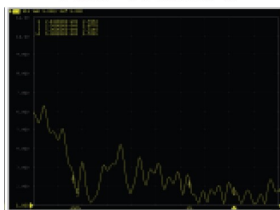
4-4.2 Measurement frequency points and VSWR value

VSWR	Frequency (Unit MHz)	Spec	3
Main Antenna	2400	$\cong 4.0$	3.3
	2500	$\cong 3.0$	1.6
	5000	$\cong 3.5$	1.9
	6000	$\cong 3.0$	1.4
	Judgement		ok
Aux Antenna	2400	$\cong 3.5$	2.5
	2500	$\cong 3.0$	1.8
	5000	$\cong 3.5$	2.3
	6000	$\cong 3.0$	1.5
	Judgement		ok

Main Antenna-3



AUX Antenna-3



UNLESS OTHER SPECIFIED TOLERANCES ON :

X = $\pm$ X.X = $\pm$ X.XX = $\pm$

ANGLES = $\pm$ HOLEDIA = $\pm$

SCALE :

UNIT : mm

DRAWN BY: 张涛

CHECKED BY: 张涛

DESIGNED BY: 胡志清

APPROVED BY: 徐克文

TITLE : WA-P-LELE-04-026 Specification



佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

DOCUMENT
NO.

PAGE REV.
P1

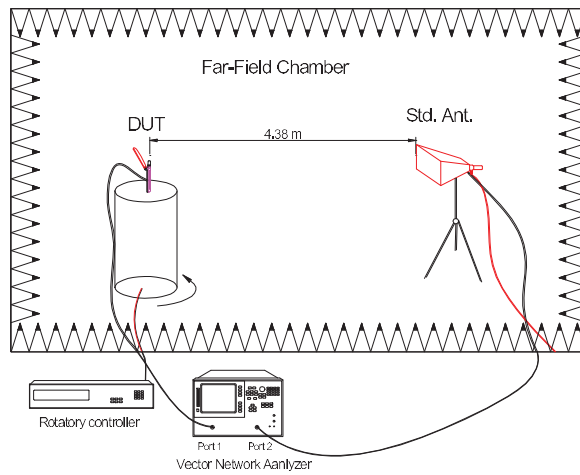
4-5. Efficiency and Gain

4-5.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

4-5.2 Chamber definition

UNLESS OTHER SPECIFIED TOLERANCES ON : X = ± X.X = ± X.XX = ± ANGLES = ± HOLEDIA = ±		 佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.	
SCALE :	UNIT : mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY: 张涛	CHECKED BY: 张涛		
DESIGNED BY : 胡志清	APPROVED BY : 徐克文		
TITLE : WA-P-LELE-04-026 Specification		DOCUMENT NO.	PAGE REV. P1



1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

4-5.3 Efficiency and Gain

Antenna gain is marked (dBi) and is based on STANDARD HORN antenna. The data shows Peak Gain and Average Gain.

4-5-3-1 Electrical specification

Frequency (MHz)	Average Efficiency (%)
2400~2500	>30
5100~5825	>30
5925~7125	>25

UNLESS OTHER SPECIFIED TOLERANCES ON :

X = $\pm$ X.X = $\pm$ X.XX = $\pm$

ANGLES = $\pm$ HOLEDIA = $\pm$

SCALE : UNIT : mm

DRAWN BY: 张涛 CHECKED BY: 张涛

DESIGNED BY: 胡志清 APPROVED BY: 徐克文

TITLE : WA-P-LELE-04-026 Specification



佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

DOCUMENT
NO.

PAGE REV.
P1

4-5.3-2 Efficiency and Gain Test Data

Frequency	Main Antenna-3		
	Efficiency	Average Gain	Peak Gain
2400MHz	36.7 %	-4.3 dBi	3.1 dBi
2425MHz	39.4 %	-4.0 dBi	4.8 dBi
2450MHz	37.7 %	-4.2 dBi	4.4 dBi
2475MHz	39.6 %	-4.0 dBi	4.5 dBi
2500MHz	48.9 %	-3.1 dBi	5.3 dBi
5150MHz	37.8 %	-4.2 dBi	2.7 dBi
5250MHz	39.7 %	-4.0 dBi	3.7 dBi
5350MHz	36.7 %	-4.4 dBi	3.1 dBi
5725MHz	42.2 %	-3.7 dBi	3.1 dBi
5825MHz	44.6 %	-3.5 dBi	3.0 dBi
5925MHz	35.0 %	-4.6 dBi	2.0 dBi
6525MHz	36.0 %	-4.4 dBi	1.9 dBi
7125MHz	36.0 %	-4.4 dBi	1.9 dBi

Frequency	AUX Antenna-3		
	Efficiency	Average Gain	Peak Gain
2400MHz	35.0 %	-4.6 dBi	1.9 dBi
2425MHz	36.8 %	-4.3 dBi	2.3 dBi
2450MHz	39.2 %	-4.1 dBi	2.2 dBi
2475MHz	40.1 %	-4.0 dBi	3.2 dBi
2500MHz	41.2 %	-3.9 dBi	3.4 dBi
5150MHz	38.9 %	-4.1 dBi	2.7 dBi
5250MHz	43.4 %	-3.6 dBi	3.7 dBi
5350MHz	39.3 %	-4.1 dBi	3.1 dBi
5725MHz	42.7 %	-3.7 dBi	3.1 dBi
5825MHz	44.6 %	-3.5 dBi	3.0 dBi
5925MHz	33.0 %	-4.8 dBi	2.3 dBi
6525MHz	33.0 %	-4.8 dBi	2.2 dBi

UNLESS OTHER SPECIFIED TOLERANCES ON :

X = ± X.X = ± X.XX = ±

ANGLES = ± HOLEDIA = ±



佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

SCALE :

UNIT : mm

DRAWN BY: 张涛

CHECKED BY: 张涛

DESIGNED BY: 胡志清

APPROVED BY: 徐克文

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

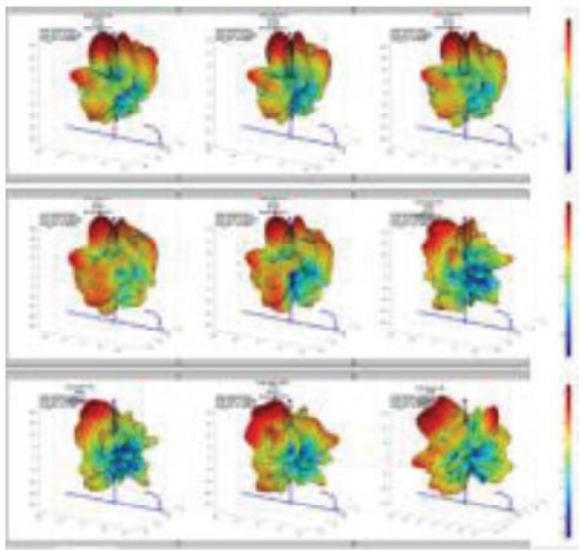
TITLE : WA-P-LELE-04-026 Specification

DOCUMENT
NO.

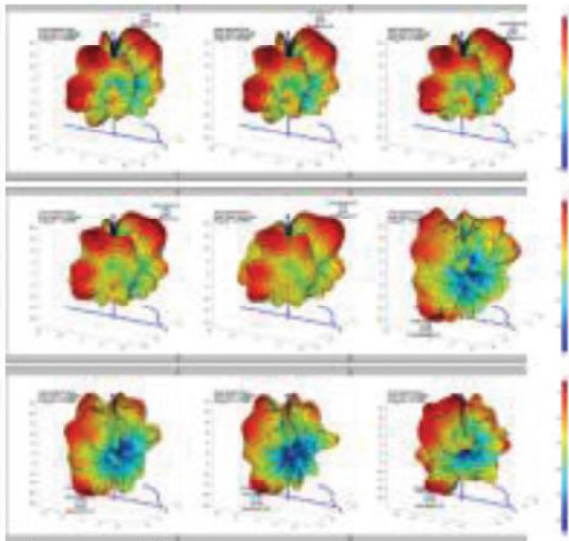
PAGE REV.
P1

4-5.3-3 Antenna 3D Radiation Pattern

Main Antenna-3



AUX Antenna-3



UNLESS OTHER SPECIFIED TOLERANCES ON :

X = ± X.X = ± X.XX = ±

ANGLES = ± HOLEDIA = ±

SCALE :

UNIT : mm

DRAWN BY: 张涛

CHECKED BY: 张涛

DESIGNED BY : 胡志清

APPROVED BY : 徐克文

TITLE : WA-P-LELE-04-026 Specification



佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

DOCUMENT
NO.

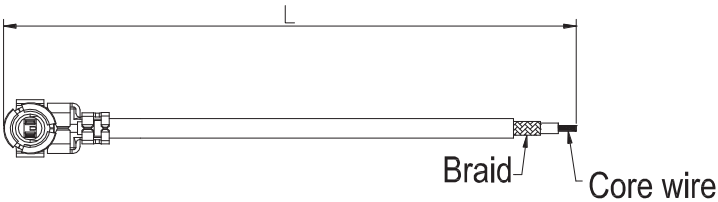
PAGE REV.
P1

5. Mechanical Specification:

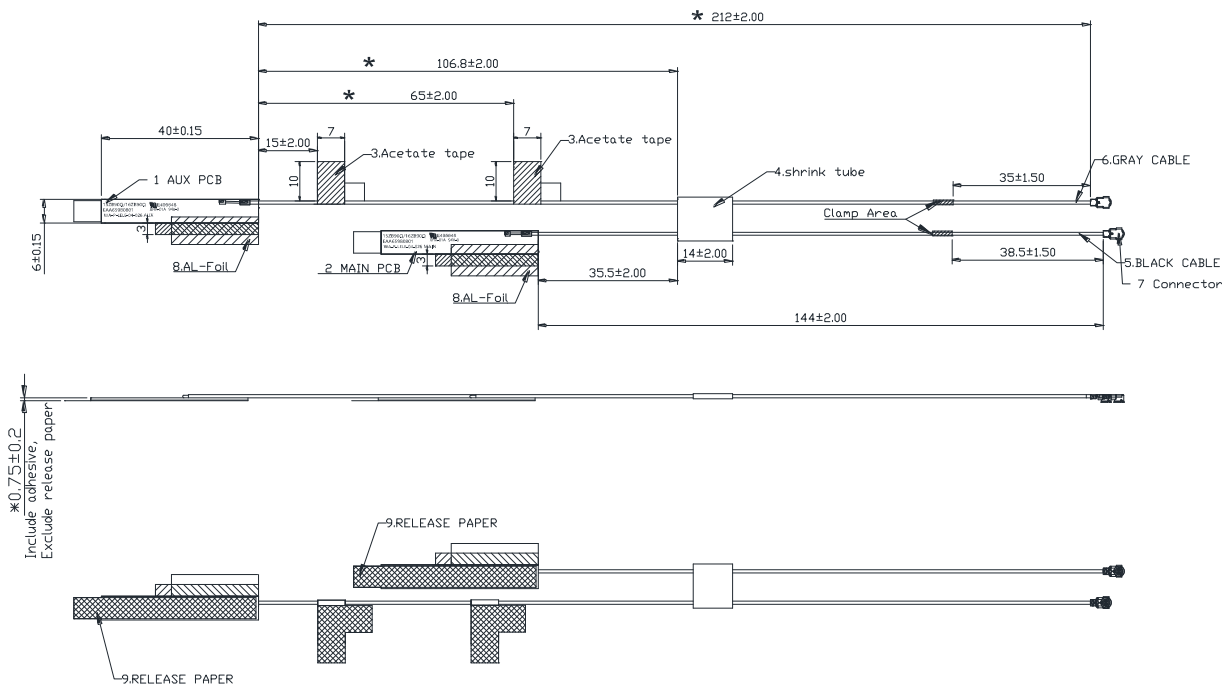
Connector: I-PEX MHF 4: 20611; Cable: RF Cable 0.81 (Main Black/Aux Gray)

Cable length: Main Antenna L: 155.6±2mm(Include connector)

Aux Antenna L: 224.8±2mm(Include connector)



Mechanical Configuration: (* dimension is important dimension)



UNLESS OTHER SPECIFIED TOLERANCES ON :		 佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.
X = ±	X.X = ±	
ANGLES = ±	HOLEDIA = ±	
SCALE :	UNIT : mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY: 张涛	CHECKED BY: 张涛	
DESIGNED BY : 胡志清	APPROVED BY : 徐克文	
TITLE : WA-P-LELE-04-026 Specification		DOCUMENT NO.
		PAGE REV. P1

Material list :

Item	Description	Material	Quantity
1	PCB AUX	FR4 40x7mm,T0.6mm	1
2	PCB MAIN	FR4 40x7mm,T0.6mm	1
3	Acetate Tape	Acetate Tape 21x7mm, T0.12mm	2
4	Shrink Tube	Shrink Tube black, ϕ 1.5 x14mm	1
5	Cable black	Cable 0.81 black	1
6	Cable gray	Cable 0.81 gray	1
7	Connector	I-PEX MHF 4 for 0.81, 20611	2
8	AL-Foil	AL Foil	2
9	PCB TAPE	G9000 39.4x5.4mm, T0.15	2
10	Clamp	Clamp 0.81 5mm	2

6. UL File No:

ITEM	DESCRIPTION	SUPPLIER	UL File No
1	PCB	M00590	E495648
2	CABLE	HA0008	E318898
		HA0053	E464731

7. Product Picture:

UNLESS OTHER SPECIFIED TOLERANCES ON :		 佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.
X = $\pm$	X.X = $\pm$	
ANGLES = $\pm$	HOLEDIA = $\pm$	
SCALE :	UNIT : mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY: 张涛	CHECKED BY: 张涛	
DESIGNED BY : 胡志清	APPROVED BY : 徐克文	
TITLE : WA-P-LELE-04-026 Specification		DOCUMENT NO.
		PAGE REV.
		P1